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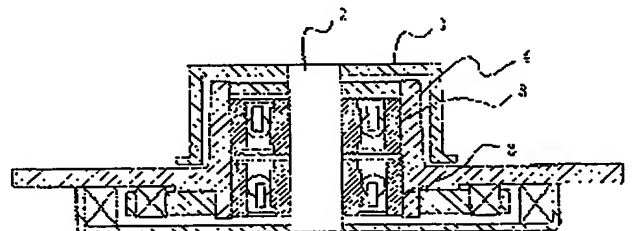
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(54) 【発明の名称】 転がり軸受

## (57) 【要約】

例えばHDDスピンドルモータユニットの軸 (2) とハウジング (4) との間に組み込んで使用される玉軸受 (3) として好適な、転がり軸受を提供する。そのため、内輪および外輪を形成する鉄鋼材料の組成を、0.80~1.20重量%、S1を0.60重量%以下、Mnを0.25重量%以下、Crを1.00~1.50重量%、Moを0.60~1.50重量%の範囲内とする。この鉄鋼材料で形成された内輪および外輪に焼入れ・焼き戻しを施して、残留オーステナイト量を0体積%に、表面硬さをHRC62以上にする。転がり体は、マルテンサイト系ステンレス鋼で形成され、焼入れ・焼き戻し後に窒化処理で表面に厚さ3 $\mu$ m以上の窒化層が形成された後に、仕上げ加工されて表面粗さ0.1 $\mu$ mRa以下になったものを使用する。



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CLAIMS

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[Claim(s)]

[Claim 1] An inner ring of spiral wound gasket, an outer ring of spiral wound gasket, and a rolling element at least any one As an alloy content, for C Si 0.80 to 1.20% of the weight 0.60 or less % of the weight, After being formed 0.25 or less % of the weight with the ferrous material which contains Cr 1.00 to 1.50% of the weight, and contains Mo by 0.60 – 1.50% of the weight of within the limits, Mn Anti-friction bearing characterized by giving hardening and tempering, and for the amount of retained austenites becoming 0 volume %, and surface hardness having become 62 or more HRC(s).

[Claim 2] Even if there are few inner rings of spiral wound gasket and outer rings of spiral wound gasket, either C as an alloy content 0.80 – 1.20 % of the weight, For Mn Cr 0.25 or less % of the weight 0.60 or less % of the weight 1.00 – 1.50 % of the weight, [ Si ] After being formed with the ferrous material which contains Mo by 0.60 – 1.50% of the weight of within the limits, hardening and tempering are given, the amount of retained austenites becomes 0 volume %, and surface hardness has become 62 or more HRC(s). A rolling element as an alloy content For Si Mn 0.3 to 1.5% of the weight 0.3 to 0.6% of the weight 0.3 – 1.7 % of the weight, [ C ] Cr is included and Mo is included 0.5 to 2.5% of the weight by 0.6 – 3.0% of the weight of within the limits. And anti-friction bearing characterized by being formed with the ferrous material whose content of O is 9 ppm or less, giving hardening and tempering after carbonitriding processing is performed, and for the amount of retained austenites becoming 0 volume %, and surface hardness having become 62 or more HRC(s).

[Claim 3] Even if there are few inner rings of spiral wound gasket and outer rings of spiral wound gasket, either C as an alloy content 0.80 – 1.20 % of the weight, For Mn Cr 0.25 or less % of the weight 0.60 or less % of the weight 1.00 – 1.50 % of the weight, [ Si ] After being formed with the ferrous material which contains Mo by 0.60 – 1.50% of the weight of within the limits Hardening and tempering are given, the amount of retained austenites becomes 0 volume %, and surface hardness has become 62 or more HRC(s). A rolling element Anti-friction bearing characterized by being formed with martensitic stainless steel, hardening and tempering being given, and nitriding treatment being performed behind, forming a nitrated case with a thickness of 3 micrometers or more in a front face, finish-machining after that, and surface roughness having become below 0.1micromRa.

[Claim 4] Even if there are few inner rings of spiral wound gasket and outer rings of spiral wound gasket, either C as an alloy content 0.80 – 1.20 % of the weight, For Mn Cr 0.25 or less % of the weight 0.60 or less % of the weight 1.00 – 1.50 % of the weight, [ Si ] It is anti-friction bearing characterized by forming the rolling element with the ceramics by giving hardening and tempering, and the amount of retained austenites becoming 0 volume %, and surface hardness having become 62 or more HRC(s) after being formed with the ferrous material which contains Mo by 0.60 – 1.50% of the weight of within the limits.

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[Translation done.]